

***Erica schumannii*, a new mat-forming species from South Africa.**

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Since the publication of *Flora Capensis* in 1905 in which 467 species of *Erica* were dealt with for southern Africa, much additional material has been accessed in the Cape herbaria. Some of this material proved to constitute very distinct new species which were subsequently described by botanists in the Cape, some was problematic in the variation patterns exhibited whilst other material has remained undescribed to this day.

One of these problems revolved around the species, *Erica goatcheriana*, described by Louisa Bolus in 1921 based on material obtained from a flower show in Cape Town with the only indication of the locality as the Ceres District. She subsequently described in 1928 two varieties of this species, var. *drakensteinensis* and var. *petrensis* based on two wild collections from two totally different areas. Since then more material has been collected and ascribed, some tentatively, to this species and its varieties. Included in this material has been some which matches the type of the species, which is now known to come from Baviaansberg in the Ceres District.

The current herbarium collections of this species are a diverse assortment of material 'forced' into taxa that have some close relationships with each other, but differ markedly in some characters. Each of these comes from a distinct area. Studies in this complex have shown us that several distinct species warrant recognition. One of these is dealt with in this paper.

Two distinct and not closely related taxa are currently filed under *Erica goatcheriana* var. *petrensis* in the Cape herbaria. Collections from the Jonaskop area match the type of var. *petrensis*, which appears to be endemic to this area. The plants are sparsely branched, but very woody, and may sprawl loosely over the huge rocks on which they grow and may produce several erect branches up to 500 mm high. We were able to study some excellent plants of this taxon when showing them to Kurt Kramer on 1 October 1997. On the Stettynsberg range on the other side of the huge Worcester-Villiersdorp valley,

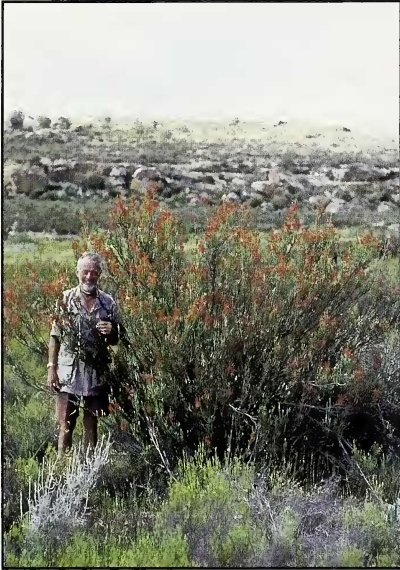


Fig. 2. Dolf Schumann with *Erica mammosa* (photograph Gerhard Kirsten).

interest in Cape heaths through his incomparable book, *Ericas of South Africa*, produced in 1992 with the co-operation of Gerhard Kirsten. A geologist and executive businessman by profession, Dolf retired to the Cape in 1978 and immediately fell under the spell of *Erica*. He decided to dedicate his time and money to making as complete a photographic record of the genus *Erica* as possible. He left no stone unturned and together with Gerhard, and sometimes ourselves, scoured the mountains for every possible species. Then he decided that a book based on his collection should be produced, and the result of his determination is a superb record of a remarkable genus (see pp. 1-2).

Erica schumannii, *E. goatcheriana*, *E. monsoniana* and *E. dianthifolia*, and other species not mentioned in this article are closely related to each other. They have very similar anthers, enlarged petaloid bract, bracteoles and sepals and often smooth shiny seeds and plumose hairs.

Erica schumannii is characterized by its dense prostrate matted habit, stout plumose hairs on the pedicel and the margins of the bract, bracteoles and sepals (not on the branches), the groove around the apex of the ovary, the thick, flap-like placenta with a naked abaxial surface, the septa of the capsule only on the valves (no portion on the columella), and the seeds with a reticulate testa (not smooth and shiny). The exact relationships are difficult to determine

there occur plants that are prostrate and densely branched forming dense mats up to 2m² over the large rocks or rocky outcrops on which they grow. These had been incorrectly placed under *Erica goatcheriana* var. *petrensis*.

In our opinion the var. *petrensis* and the var. *drakensteinensis* should be raised to specific status, but this will be discussed in a future paper dealing with the *Erica goatcheriana*. However, the Stettynsberg material clearly does not belong with var. *petrensis* and is described here as a distinct new species.

We have great pleasure in naming this new species in honour of Dolf Schumann who will turn 80 in July 1998. Dolf is a member of the Society and has done much to promote an

in a whole group of complex species, which have a variable suite of characters in different combinations, which distinguish them. *E. goatcheriana* var. *goatcheriana* has a bulging placenta with ovules all over the abaxial surface, and has reticulate seeds with elongate testa cells and is more related to *E. monsoniana* with its upright growth and numerous plumose hairs on the stem and pedicel. *E. goatcheriana* var. *petrensis* also has the same placenta as in var. *goatcheriana*, but the seeds are smooth and shiny, the anthers have a distinct adaxial nose, and there are no plumose hairs on any organ. *Erica dianthifolia*, which presently resides in another section in the genus, has an identical placenta to *E. schumannii* but has smooth glabrous branches, no plumose hairs on the margins of the leaves or sepals, but numerous plumose hairs on the pedicel and has smooth shiny seeds.

The new species appears to be confined to the rocky ridges and upper slopes of the various peaks west and east of the summit of the Stettynsberg range northeast of Villiersdorp. Depending on their age the plants form small to large mats sprawling over rocks which can be either exposed low outcrops or large to very large boulders or groups thereof. In the latter cases the plants grow out of crevices. In secluded areas the plants can be very large up to 2m² in extent and arising from a substantial stem some 100 mm in diameter. In these habitats plants can become very old because they are protected from fires.

***Erica schumannii* E.G.H. Oliv., sp. nov.**

Erica schumannii prostrata et tegetiformis, pilis plumosis in pedicello et marginibus bractee bracteolarum et sepalorum, placenta crasso-ligulata abaxiale nuda, seminibus reticulatis.

TYPE: SOUTH AFRICA, Western Cape, 3319CD, Kaaiman's Peak at southern end of Stettynsberg, along rocky ridge overlooking Kaaiman's Gat, tending to grow against or spreading out over rocks, c. 4500 ft, 25 January 1970, *Esterhuysen* 32379 (BOL holotype; isotypes **BM, BOL, K, MO, NBG, NY, P, PRE, S**).

Low prostrate mat-forming or cushion-like **shrub** sprawling over rocks, small to occasionally 2m², single-stemmed reseeder. **Branches:** numerous prostrate, the main branches continuing vegetative growth or sometimes ending in a florescence, numerous secondary branches 10–30mm long mostly terminating in a florescence, occasional tertiary branchlets ±5mm long, young branches with internodes 2mm long with infrafoliar ridges and dense simple retrorse indumentum. **Leaves:** 3nate, erect imbricate 6 x 1mm, narrowly oblong, flattened adaxially, with minute spicules,

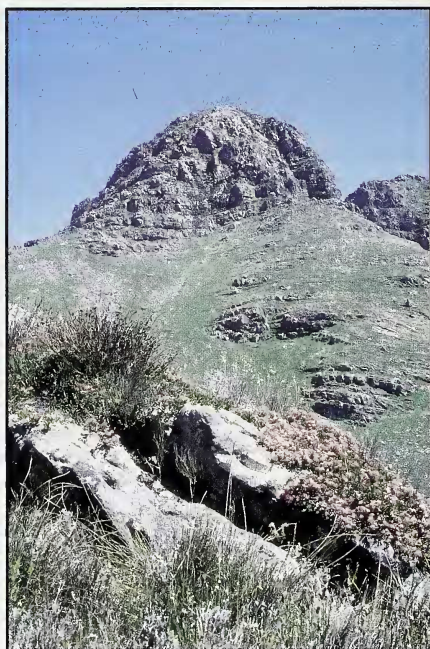


Fig. 3. *Erica schumannii*, locality and habitat (photograph Dolf Schumann).

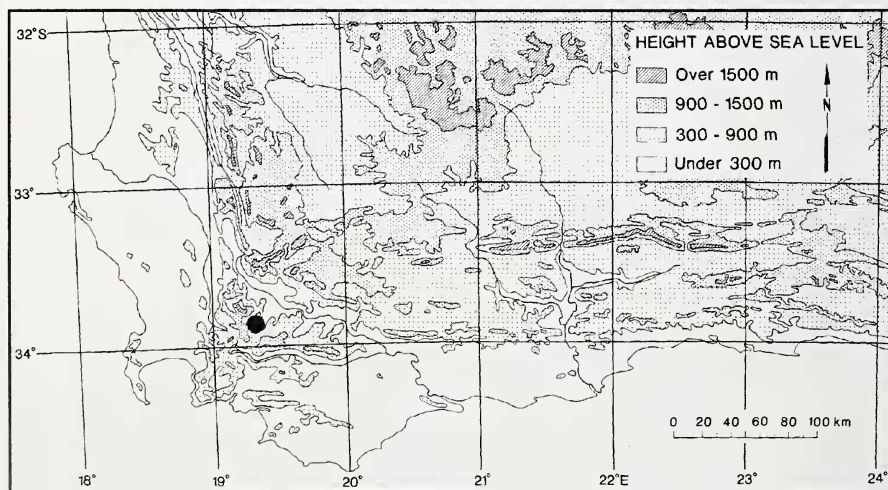


Fig. 4. Distribution of *Erica schumannii* in the Western Cape, South Africa.



Fig. 5. *Erica schumannii*, close-up of plant in Fig. 3 (photograph Ted Oliver).



Fig. 6. *Erica schumannii*, close-up of flowers (photograph Dolf Schumann).

abaxially rounded, narrowly sulcate and glabrous, edges ciliate with long plumose hairs breaking off in older leaves, apex with simple 1 mm long spine dropping off in older leaves; petiole appressed, 10–15mm long, glabrous, margins with dense plumose hairs. **Inflorescence:** with 3 nate flowers in 1[2] whorls at ends of secondary and tertiary branchlets, numerous; pedicel 8–14mm long pink, covered with long white plumose hairs; bract partially recaulescent near middle position, 5.2 x 2.0mm elliptic, glabrous, pink, fringed with long plumose white hairs, apex with slight point, sulcate for one-quarter of its length; bracteoles 2, inserted three-quarters of the way up pedicel, 5.2 x 1.2mm, oblong-elliptic otherwise like bract. **Calyx:** 4-partite, segments imbricate at base, 5.0 x 2.2mm, ovate-elliptic, narrowly sulcate for two-thirds of their length, pink, fringed with long plumose white hairs, slightly pointed at apex. **Corolla:** 4-lobed, 6.0 x 4.5mm, urceolate, glabrous, pink; lobes erect to subspreading, about one-third the length of corolla, triangular, subacute, imbricate at base, margins entire. **Stamens:** 8, free, included; filaments linear relatively broad at 3mm with an apical s-bend, glabrous; anthers bilobed, oblong, appendiculate; thecae erect appressed, 1.5 x 0.5mm, ovate, glabrous, dark brown, pore one-third to one-quarter the length of theca; spurs 1.0 x 0.7mm obovate, pendulous, serrate, attached at base of thecae; pollen in tetrads. **Ovary:** 4-locular, 2 x 2 mm, obovoid, obtuse with slight subapical horizontal groove, glabrous; nectaries present; ovules ± 40 per locule spreading and pendulous, placenta flap-like abaxially devoid of ovules and glabrous; style manifest or slightly exerted, 4 mm long, glabrous, red; stigma capitate dark blackish red. **Fruit:** a dehiscent capsule, 2.5 x 3.5mm, cyathiform, smooth, the valves very hard, splitting for three-quarters their length, the septa only on valves and free from columella; seed ovoid 0.7 x 0.5mm, reticulate, yellow-brown; testa cells subequally hexagonal with thick anticlinal densely pitted walls.

Paratypes: W. CAPE. 3319: (-CD), Stettynsberg, rocky clefts at high altitude, 01-1970, *Jackson sub Baker* 2978 (NBG); Stettynsberg, NW end of Klein Tafelberg, rocky E slopes, growing in rock outcrops, low spreading over rocks, 4700 ft, 10-01-1985, *Oliver* 8651 (NBG); *ibid.*, 10-01-1985, *Schumann* 279 (NBG).

Icon.: Schumann & Kirsten, *Ericas of South Africa*, p. 213 (1992) as *E. goatcheriana* var. *petrensis* (reproduced here as figs 3 & 6).

The heathers in John Gerard's *The Herball or generall Historie of Plantes* 1597-98, and Thomas Johnson's 'Very much Enlarged and Amended' edition 1633.

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We should not let the 400th anniversary of the publication of one of the most famous botanical works in the English language – ‘the Bible of English herbalists’ (Blunt & Raphael 1994) – to pass unnoticed. There have been rather few celebrations of this quatercentenary, and perhaps the reasons for this reticence include Gerard’s not-unblemished reputation among botanists and bibliographers (for additional information see, e.g. Anderson 1977, Arber 1986, Blunt & Stearn 1994, Henrey 1975). He has been accused of plagiarism, an accusation that is hard to evaluate but which is most probably unsustainable (see Stearn’s note in Arber 1986: 310-311).

The Herball or generall Historie of Plantes was probably issued early in the Spring of 1598. Gerard’s own foreword addressed ‘To the courteous and well willing Reader’ is dated 1 December 1597, as were Matthias de l’Obel’s and Lancelot Brown’s epistles that preface the book. The engraved portrait, by William Rogers, showing the author holding a potato flower is dated 1598 (Frontispiece p.iv: ‘*anno ætatis suæ 53 1598*’ [in the 53rd year of his age 1598]), thereby giving rise to confusion. Be that as it may, we should recall that in England during the 1590s the new year began on 25 March not 1 January (even though the Gregorian calendar was introduced in 1582) so there is plenty of scope to accommodate both dates.

JOHN GERARD, MASTER IN CHIRURGURERIE

John Gerard (or Gerarde) was a native of Nantwich in Cheshire, born in 1546. He went to school in Willaston, two miles from his home. Thereafter he studied medicine. In 1562 he was apprenticed to Alexander Mason, of the Barber-Surgeons Company of London, and was admitted to the freedom of the Company in 1569. Gerard became well known as a herbalist, and was superintendent of the gardens of Lord Burghley at Theobalds in Hertfordshire and at The Strand, London. He had his own garden at Holborn, and published two catalogues (1596 and 1599) of its contents. In the early 1600s he was